

## 1.0 TITLE OF EFFORT: Management Integration & Control

### 2.0 TASK DESCRIPTION:

The contractor shall provide all necessary program, business management, engineering, technical, administrative skills to accomplish the objectives and outcomes described within this contract. The contractor shall perform the services and deliver the products described in this Statement of Work (SOW), contract terms and conditions, applicable documents, Data Requirements Descriptions (DRDs), and other plans and sections contained within this contract. These products and services will be in direct support of the International Space Station Program (ISSP) to manage and integrate the implementing organizations (NASA Center institutions, other contractors, and International Partners/Participants) and ISSP customers. This includes the continued development, maintenance, and implementation of top-level research and development (R&D) requirements, which flow to the implementing organizations to enable the continued operation and utilization of the ISS R&D facility.

### 2.1 STATEMENT OF WORK REFERENCE: 1.0 Management Integration & Control

### 2.2 REQUIREMENTS / DELIVERABLES / SCHEDULE:

SOW	Performance Requirement	Workload Indicators	Quantity	Schedule
1	MANAGEMENT INTEGRATION AND CONTROL			
1.1	PROGRAM MANAGEMENT			
1.1.1	Program Management and Administration	Program Management and Administration	Continuous	Continuous
1.1.1.1	Planning and Reviews			
1.1.1.1.1	PI&C Plans			
1.1.1.1.1a	Develop PI&C Management Plan	PI&C Management Plan	See DRD	See DRD
1.1.1.1.1b	Develop PI&C Closeout Plan	PI&C Closeout Plan	See DRD	See DRD
1.1.1.1.2	Performance Management Reviews (PMRs)			
1.1.1.1.2.a	Conduct PMRs with NASA	PMRs	Once	Monthly
1.1.1.1.2.f	Provide integrated IMRPs & present at PMR	IMRPs	See DRD	See DRD
1.1.1.1.3	Coordinate with NASA to make DR deliverables and other contract performance data compatible for MIS use and linkage.	Updates to subset of DR deliverable and contract performance data (PMR), including format changes, as required	Once	Monthly
1.1.1.1.4	PI&C Certification of Flight Readiness	PI&C CoFR Plan	See DRD	See DRD

1.1.2	Internal/External Program Review Support			
<b>1.2</b>	<b>BUSINESS MANAGEMENT</b>			
1.2.3	Resource Management			
1.2.3.1	Financial Management			
1.2.3.1.a	Develop implement, maintain, and update a contract financial system	Contract financial system	Continuous	Continuous
1.2.3.1.b	Contractor's financial planning system	Contractor's financial planning system	Continuous	Continuous
1.2.3.1.c	Financial reporting	NF533 M/Q Cost Reporting	See DRD	See DRD
1.2.3.2	Performance Management			
1.2.3.2.1	Develop, implement, and maintain a Performance Measurement System (PMS)	PMS	Continuous	Continuous
1.2.3.2.2	Provide Cost Performance Reports (CPRs)	1. CPR	1. See DRD	See DRD
1.2.3.2.2		2. CPR Earned Value Methodology Report	2. See DRD	
1.2.3.2.3	Subcontracts performance measurements reports	Subcontracts performance measurements reports	Included in 1.2.3.2.2	Included in 1.2.3.2.2
1.2.3.2.4	PMS report	Summary CPR report at PMR	Once	Monthly
1.2.3.3	Organizational Management	Organizational/Workforce Reports	See DRD	See DRD
1.2.3.4	Contract WBS	Contract WBS and WBS Dictionary	See DRD	See DRD
1.2.5	Scheduling			
1.2.5.1	Schedule Management			
1.2.5.1	Develop PI&C contract schedules and provide month-end schedule and analysis for inclusion into the Integrated Program Schedule	- Updates to TOs, contract mods - Monthly reviews and Updates	1	monthly
1.2.5.1	Prepare and report ISS Program schedule metrics	Schedule metrics @ PMR	1	Monthly
1.2.5.1	Develop and provide Integrated ISS Program budget-loaded, summary and intermediate level detail schedules and logic links to lower level detail schedules.	Schedule and analysis showing progress to date versus planned for the current PI&C Task Orders.		Monthly
1.2.5.1.1	Integrated Program Schedule Management	Provide Integrated ISSP resource-loaded and critical		

		path and external interface linked schedules from all ISSP contractors and performing organizations into a single master ISSP schedule.		
1.2.5.1.1.a	Develop ISSP schedules as required	1. ISS Program schedules and charts for the IPSP, IMPR, EWS, ISS Organizational projects (e.g. ELC/HAB HW), ISS CRs with development tasks. 2. Develop high level EVM schedules (1 pagers).		Monthly
1.2.5.1.1.b	Provide ISSP schedules updates and status reports	IPSP reviews schedule updates and special topic charts including charts for IMPR/EWS emphasis.  Projects, incl. ISS CRs are statused / reviewed in PP&C/ACES.		Every other week for IMPR and EWS. As requiredAs required
1.2.5.1.1.c	Maintain and update ISS critical HW/SW deliveries, activities & tasks integrated with ISS Program flight schedules.	Integrated, summary level and intermediate level detail schedules for program management. IMPR	One top level and one intermediate level	Weekly
1.2.5.1.1.d	Maintain and update the Integrated Program Schedule and the Key Program Performance Indicators (KPPIs) for the ISSP Management Information System (MIS) and PP&C website.	Updates to Program Management Information on PP&C Web site and IPS Schedules to ISSP MIS.	One set of updates	Monthly, weekly, bi-weekly (as agreed with program participants).
1.2.5.1.1.e	Support assessment of new scheduling tools and the assessment/ development of new scheduling processes/ products as required.	Schedule tool & process assessments/implementation		
1.2.5.1.2	Provide support to the Integrated Program Schedule Panel (IPSP).	Meeting planning, issue identification, schedule status analyses, special agenda topics	Once	Weekly
1.2.5.1.3	Obtain, input, assess updates to IPS	1) Electronic Schedule updates from Boeing 10K, CMC, MIC, PI  2) One	1) One each  2) One	1) Monthly  2) Weekly

		2) Electronic schedule update from MOD	3) One	3) Monthly
		3) Electronic schedule update from MSFC REGEN ECLSS detail	4) One each	4) Every other week
		4) Matrix updates from Program participants		
1.2.5.10	Incorporate Detail Project Schedules - Collect and incorporate detailed project schedules into the IPS, with concurrence from NASA.	Incorporate detail project schedules		
1.2.5.2	Scheduling System Support			
1.2.5.2.a	Operate a scheduling system identified in Section J-1, Appendix D, Table 1 in support of the ISS Program	Operation and maintenance of the data in the scheduling system		
1.2.5.2.b	Review other contractor schedules to ensure compliance with DRD A-PC-06. The contractor shall work through the Integrated Program Schedules Panel (IPSP) to identify and resolve schedule process and data issues	1. Review other contractor schedules by participating in audits of Program Participants schedules		Monthly
1.2.5.2.b		2. Resolve schedule process and data issues	2. As identified	2. Monthly
1.2.5.3	Team Schedule Support	Top level and lower level schedules with analyses (e.g. IP Elements, and ISS projects).		
1.2.5.4	Common Schedules Database (CSD) Archival Research Support	Not required during this performance period.		
1.2.5.5	Maintain ISS Program Planning Calendar and post on ISS Website	Update and upload ISS Program Planning Calendar on ISS website and distribute hard copies	Twice	Weekly
1.2.5.5	Provide maintenance of the CoFR Review Meeting Matrix	Participate in meetings, provide updates and post to website	Once	Weekly

1.2.5.6	Perform independent schedule assessments of HW and SW development, Integrated Assessments including schedule risk/cost analysis and critical path analyses.	Independent integrated schedule assessments	As identified	As required
1.2.5.7	Special Schedule Trade Studies	Perform special schedule trade studies.		
1.2.5.8	Integrated Schedule Analysis	Perform schedule analysis which can be integrated into the overall program assessment.		
1.2.5.9	Propose Alternate Report Formats	Develop and propose alternate report formats for NASA review and concurrence		
<b>1.3</b>	<b>CONFIGURATION MANAGEMENT (CM) / DATA INTEGRATION (DM)</b>			
1.3.1	Configuration Management	ISSP Configuration Management	Continuous	Continuous
1.3.1.1	Management and Administration	1. Establish and maintain ISSP CM policies, procedures, and requirements and an ISSP CM infrastructure	Continuous	Continuous
1.3.1.1		2. Updates to SSP 41170, SSP 50010, SSP 50123, and SSP 50172, SSP 50744, SSP 50421, SSP 50706, SSP 50764	Update as required	Yearly
1.3.1.1	Create additional CM processes	CM processes development	3 processes	Yearly
1.3.1.1	Evaluate key customer interface to CM program for improved process effectiveness	Produce a report detailing process improvements with an implementation plan	Once	March 2007
1.3.1.1.1	Develop and implement a CM Plan	Maintain and update a CM Plan	Update as required.	See DRD
1.3.1.1.2	Participate in Technical Interchange Meetings (TIMs) and ISSP Milestone Reviews by providing inputs regarding CM	Participation in TIMs and ISSP Milestone Reviews	5 to 10 meetings	Yearly
1.3.1.2	Configuration Status Accounting (CSA) and Verification	CSA requirements maintenance	Continuous	Continuous
1.3.1.2.1	Participate in ISS	Participation in FCAs and	6 audits	Yearly

	hardware and software Functional Configuration Audits (FCA) and Physical Configuration Audits (PCA)	PCAs for all 1st time build configuration items at approximately 90% complete.		
1.3.1.2.2	Participate in ISS Acceptance Reviews and Flight Readiness Reviews	Participate in ISS Acceptance Reviews and Flight Readiness Reviews	2 Acceptance Reviews and 8 Flight Readiness Reviews	Yearly
1.3.1.2.2	Provide Configuration Status Accounting support to the OCWG	Participate in OCWG	1 meeting	Weekly
1.3.1.2.3	Conduct CM audits of other ISS Program contracts	CM audits	A minimum of 1 audit for each of the ISS contracts (4)	Completed by May 31, 2007
1.3.1.2.4	Audit and validate program status accounting systems data	Data audit and validation for COSMOS	1 update	Daily
1.3.1.2.5	Baseline Maintenance. Monitor policy and procedures to ensure overall maintenance and control of baseline.	Review and evaluation of changes.	50-70 Change Packages	Monthly
1.3.1.3	Configuration Control			
1.3.1.3.01	Ensure execution of the Change Process	Ensure execution of the Change Process	Continuous	Continuous
1.3.1.3.01	Provide single point focal ISS program International partner Change Integrator	Assist in tracking, status, and closure of International Partner changes. Assist in managing IP actions, telecons, and IP CMTIMs	Continuous	Continuous
1.3.1.3.01	Provide a thorough review of all Directive Packages to ensure quality packages prior to submittal for NASA CM signature.	Provide metrics on PI&C and all contracts to document rework scoring.	50-70 Change Directive Packages	Monthly
1.3.1.3.02	Maintain CM blank forms/templates	Maintain all CM blank forms/templates	33 blank forms, 10 updates	Yearly
1.3.1.3.03	Provide CM Secretariats for all ISS Control Boards and Panels	CM Secretariats	1. 8 board meetings	1. Weekly
1.3.1.3.03			2. 6 multilateral board meetings	2. Monthly
1.3.1.3.03			3. 4 Program Manager Reviews	3. Quarterly
1.3.1.3.03			4. 4 SSCB's	4. Yearly, as required (currently supported by

				OX)
1.3.1.3.04	Provide meeting support	1. Meeting support	1. 23 meetings	1. Weekly
1.3.1.3.04		2. Multi-lateral meeting support	2. 6 multilateral meetings	2. Monthly
1.3.1.3.04		3. Decision Documents	3. 46 documents	3. Yearly
1.3.1.3.05	Conduct a Change Screening Board (CSB).	CSB	1 meeting	Weekly
1.3.1.3.06	Maintain the Change Engineer (CE) Handbook	CE Handbook, SSP 50706	Once	See DRD
1.3.1.3.07	Process changes specific to the PI&C contract in accordance with SSP 50123. Review and evaluate ISSP changes originating from outside the PI&C contract to determine if those changes have potential impacts to the PI&C contract	1. Process PI&C changes	1. 15 change packages	1. Monthly
1.3.1.3.07		2. Evaluate ISSP changes originating from outside the PI&C contract	2. 85 change packages	2. Monthly
1.3.1.3.07		3. Provide support for special projects requiring lifecycle CM knowledge. Activities will include project planning, documentation changes, expedited CM process development and facilitation of new ISS requirements development to support expedited processing and ensure traceability of data is available for certification of flight readiness.	3. Continuous	3. Continuous
1.3.1.3.08	Input, maintain, and validate the data in the Configuration Status Management Operations System (COSMOS) database daily and provide accurate information, reports, and monthly metrics	1. COSMOS database update	1. 50-70 changes	1. Monthly
1.3.1.3.08		2. Reports and metrics	2. 20 metrics	2. Monthly
1.3.1.3.08		3. Coordinate and control user functionality of COSMOS tool.	3. Continuous	3. Continuous
1.3.1.3.08	Process all ISS change directive packages (in	Obtain, track, and status directive package signatures.	50-70 Change Directive	Monthly

	addition to PI&C changes processed under 1.3.1.3.7).	This includes obtaining change signatures, change action tracking, and change request/directive data entry into COSMOS.	Packages (Directive Desk)	
1.3.1.4	Reserved.			
1.3.1.5	Software Configuration Management Requirements	Software CM Requirements maintenance in SSP 41170 and D684-10293 Vol. 1	2 documents	Yearly
1.3.2	Program Data Management and Integration			
1.3.2.1	Data Management	Data Management System	Continuous	Continuous
1.3.2.1.1	Update and maintain SSP 50573, Program Documentation Tree	1. Maintain working version of SSP 50573	1. One update	1. Weekly
1.3.2.1.1		2. Release updated document tree within ISS Program	2. Continuous	2. Continuous
1.3.2.1.2	Update and maintain the ISSP technical documentation baseline	Upload approved documentation to EDMS and capture documentation data in COSMOS	5 documents	Weekly
1.3.2.1.3	Not required in current TO.			
1.3.2.1.4	Data Requirement (DR) receipt, tracking, monitoring, reporting, validation, evaluation, distribution, status, and storage for ISSP contracts and the IP/P data deliverables incoming to the ISSP	1. DR Receipt, tracking, monitoring, reporting, validation, evaluation, distribution, status, and storage of DRs identified in ISSP contracts	1. 170 deliverables	1. Monthly
1.3.2.1.4		2. Tracking of IP/P data deliverables identified in SSP 50124, SSP 50126, SSP 50127, SSP 50137, SSP 50407, SSP 50611, SSP 50614, SSP 50617	2. 25 deliverables	2. Monthly
1.3.2.1.5	Manage and operate the International Partner library	IP Library management and operation, including receipt, logging, and storage of IP data, such as but not limited to, protocols, faxes, BDEALS deliverables, safety data packages, hazard reports, drawings, NAS15-10110 (RSA contract) deliverables, etc.	300 entries into EDMS	Monthly
1.3.2.1.6	PI&C Provide an Engineering Release Unit (ERU)	PI&C ERU	5-8 documents/DCNs released	Monthly



1.3.2.1.7	Operate a Configuration PI&C Management Receipt Desk (CMRD)	PI&C CMRD	300 change paper items	Monthly
1.3.2.1.7	Operate a CMRD support function to coordinate the ISS Program review of Shuttle and Constellation Program Changes	Provide Shuttle Program and Constellation Program CR review and response coordination	90 changes	Monthly
1.3.2.1.8	Provide Document Quality Assurance (DQA) for ISSP PI&C documentation, other ISSP documentation not included in another ISSP Contract, and joint ISS/CxP documentation. Lower boards and team documents will only have low level DQA.	DQA reviews and updates	Up to 20 documents	Monthly
1.3.2.2	Program Technical Data Access			
1.3.2.2.0a	Integrate and maintain the Orbital Replacement Unit (ORU) data and Flight Support Equipment (FSE) data in the Orbital Replacement Unit Data Directory (ORUDD)	Maintain ORUDD with ORU & FSE data updates	8	Twice per quarter
1.3.2.2.0b	Define requirements for access to Program data by all ISS users	Program data access report and associated requirements	Once	
1.3.2.2.1	Not required in current task order.			
1.3.2.2.2	Book Coordination			
1.3.2.2.2.a	Provide book coordination functions for Blank Books	Blank Book updates	One	Yearly
1.3.2.2.2.b	BDEALS/BHSEALS	SSP 50126, SSP 50124, SSP 50127, SSP 50407, SSP 50137, SSP 50611, SSP 50614, SSP 50617 and SSP 50352 updates	1 update per book, as required	Every 6 months per book (June & December)
1.3.2.2.2.c	SSP 50622-03	Periodic updates to SSP 50622-03	2 updates	Yearly
1.3.2.2.3	Respond to requests for resolving data workflow process issues	1. Identification, Investigation, analysis and documentation of the data workflow processes involved and the associated interfaces	8	Yearly
1.3.2.2.4	Support to ISSP Data Users			

1.3.2.2.4.a	Respond to and resolve inquiries regarding ISSP data	Inquiry response including special EDMS issues, Critical First Steps (CFS) and migration tasks	65	Monthly
1.3.2.2.4.b	Locate data, identify, and resolve data discrepancies and document data processes	Resolution of data discrepancies	16	Yearly